Lesson 108

Objective
Students will measure a line segment to the nearest half inch or half centimeter.

Students will solve addition problems involving mixed numbers and will locate mixed numbers on a number line.

Preparation
For each student: rulers with half-, quarter-, eighth- and sixteenth-inch marks; rulers with half-centimeter marks *(masters on page M7);* optional Number Lines in Fractional Increments *(master on page M28)*

Lesson Plan
Up to now, the students have been measuring lines to the nearest inch and centimeter. Ask them if they think all measurements of length will be in exact inches and centimeters. *(No)*

This lesson will practice measuring lines that fall halfway between inch and centimeter marks. Over time the students will learn to measure to a closer accuracy than half inches and half centimeters.

Hold up a ruler or yardstick that has quarter, eighth and sixteenth inch marks. Ask the students how they know which are the half-inch marks with all the other marks in between the inch marks. *(Usually the inch marks are longest, half-inch marks are shorter, and the the quarter-inch marks are a little shorter yet.)*

Select one of the marks other than the half-inch mark. Ask students how they know from looking at the ruler that the mark is not the half inch mark. *(The mark is NOT halfway between the nearest inch marks.)* Using their rulers, have them see if they can find the halfway point across their desks. Go through #1 - #3 with the students.

On the board, write the addition problem involving a mixed number. Show the students how the one half is added separately from the whole numbers 2, 4 and 1.

Have the students find each of these mixed numbers and mark them on their number lines. For 7 1/2, let them turn over the paper and draw their own number line.

Stretch
Sarah, Paula and Laurie like to play field hockey, soccer and volleyball.

Sarah doesn't play volleyball.

Neither Sarah nor Paula likes field hockey.

Pair each girl with her favorite sport.

Answer: Sarah - soccer, Paula - volleyball, Laurie - field hockey